XXII. *Obſervation of the late Tranſit of* Venus: *In a Letter to* James Burrow, *Eſquire, V. P. R. S. By Mr.* James Horsfall, *F. R S.*

SIR,

Read June 8, 1769. LOOKING upon it as the duty of every member of the Royal Society, to contribute their mite towards the diſcovery of ſuch an important matter as *The dimenſions of the ſolar ſyſtem*, I therefore take the liberty to communicate to you the following obſervations, made upon the late tranſit of Venus.

They were made with a Gregorian teleſcope, magnifying at leaſt 100 times.

The time undermentioned is equal time.

The rate of going of the two clocks had been correctly aſcertained by my friend Dr. Bevis, and myſelf, by obſerving the Sun paſs the meridian for ſeveral days preceding the day of the tranſit.

My ſituation was upon a platform laid upon the ridges of my own chambers near the Middle Temple Hall: conſequently, the great volumes of ſmoke ariſing from the houſes to the north-weſt were no ſmall impediment to a good obſervation: this was very remarkable at the *time of internal contact*. The Sun's limb undulated then prodigiouſly, and there was alſo a guſt of wind which made the teleſcope vibrate, but not

not ſo much as once to loſe the planet out of the field. I pronounced that moment (I mean that of internal contact) as ſoon as I ſaw a lambent light (*not* a *well-defined* light) whirl round the opaque limb of the Planet; from whence I am inclined to think I pronounced that *too early* by two or three ſeconds.

The firſt part of this rare phænomenon, which I beheld, was a kind of penumbra, at $7^h\ 8'\ 50''$.

I then counted 1, 2, 3 to $8''$, and plainly diſcerned the dark limb of Venus make a dent very near the vertex of the Sun's limb.

At $7^h\ 26'\ 34''$ I perceived the lambent light above-mentioned; at which time the Sun was not above $\frac{1}{4}$ of a degree above the top of a chimney.

This is a ſimple and faithful relation of what I obſerved, which I had not even copied till this morning, after you was pleaſed to notify your expectation.

I am glad of this opportunity publicly to acknowledge the many obligations you have been pleaſed to confer on me; and am,

SIR,

(with great reſpect),

Your much obliged,

and moſt obedient,

humble ſervant,

Middle-Temple,
8 June, 1769.

J. Horsfall.